

Nutrition Aspects of Human Performance

APK6167 | 3 Credits | Fall 2025

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Course Info

INSTRUCTOR

Christopher Brown, PhD, LAT, ATC, CSCS, TSAC-F, PES, OPE-C
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Clinical Education Coordinator, Doctor of Athletic Training Program
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OFFICE HOURS

Will be posted in CANVAS during the semester. Will be 2 hours a week.

MEETING

Access course through Canvas on UF [e-Learning](#) & the Canvas mobile app by Instructure

TIME/LOCATION

COURSE DESCRIPTION

This course addresses the aspects of nutrition that are related to exercise performance. Emphasis will be placed on the bioenergetics systems, the components of nutrition, nutritional and body composition assessments, ergogenic aids and diet modifications for physically active individuals and athletes. Prepares students for sports nutrition certification exams including the CISSN.

PREREQUISITE KNOWLEDGE AND SKILLS

None

REQUIRED AND RECOMMENDED MATERIALS

- Required: Fink, H.H. and A.E. Mikesky. **Practical Applications in Sports Nutrition 6th Edition**. Jones& Bartlett Learning. 2020. ISBN: 978128418340
- Required: PDF copies of Position Stands published by the International Society of Sports Nutrition are provided throughout the course and are required reading

COURSE FORMAT

Students access and complete course assignments through the APK6167 Canvas page. Course topics are organized into weekly learning modules. Each module includes ~3 practice activities corresponding with the module's learning materials (i.e. textbook reading, research articles, and associated lecture videos). In addition, each module contains the following graded assignments: an applied assignment, a discussion board, and a module quiz. A midterm exam and final exam are included in addition to the module assignments.

COURSE LEARNING OBJECTIVES:

By the end of this course students will be able to:

1. Describe the digestion and absorption of macronutrients and micronutrients

2. Clarify effects of high and low carbohydrate diets on exercise performance
3. List the potential athletic benefits of manipulating fat content in our diet
4. Reflect on increasing protein intake to promote exercise adaptations
5. Summarize specific physiologic functions of micronutrients
6. Specify fluid intake recommendations before, during, and after exercise
7. Calculate macronutrient recommendations for endurance athletes, strength/power athletes, and team sport athletes
8. Provide sports nutrition recommendations for special populations of athletes
9. Recommend nutrition strategies related to weight management goals
10. Contrast the benefits and challenges of unique body composition assessments
11. List the ergogenic benefits of popular dietary supplements.
12. Complete sports nutrition certification exams from a variety of organizations

University Policies

- University policy is listed [here](#)

Course Policies

PARTICIPATION POLICY

Active participation in the course is mandatory. Interaction with the course through graded Discussion boards in each module makes up the participation grade and is part of the final grade in the course.

APPROPRIATE USE OF AI TECHNOLOGY

The UF Honor Code strictly prohibits [cheating](#). The use of any materials or resources prepared by another person or Entity (inclusive of generative AI tools) without the other person or Entity's express consent or without proper attribution to the other person or Entity is considered *cheating*. Additionally, the use of any materials or resources, through any medium, which the Faculty / Instructor has not given express permission to use and that may confer an academic benefit to a student, constitutes *cheating*.

The use of AI tools will facilitate student development of skills and knowledge acquisition within the stated learning objectives of the course and are permitted in this course. When students opt to leverage AI tools to augment their submitted products, they will be expected to appropriately cite the tool(s) utilized. Further, students will be held accountable under the scope of the UF Student Honor Code & Conduct Code for the content of all work they submit (including the portions that may have been produced in part or whole by an external Entity—including AI). Thus, students should engage in active editorial and underwriting efforts to ensure the totality of the work submitted reflects their intentions and ethical values.

EXAM MAKE-UP POLICY

Unless excused based on [University policies](#) missed examinations and non-submitted or late assignments will be not be evaluated and will be assigned a grade of 0. Obtaining approval for make-up exams or make-up assignments is the responsibility of the student. Students with medically or emergency related circumstances should utilize the UF Care Team's [Contact My Instructor](#) service provided by the UF Dean of Students Office. Any non-medical or emergency related circumstances require students to submit a written request explaining why an exception is being requested. The written request must include official documentation that provides proof that the missed coursework was due to acceptable reasons outlined by University policy. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the [online catalog](#).

COURSE EVALUATIONS

- 1) The email they receive from GatorEvals,
- 2) Their Canvas course menu under GatorEvals,
- 3) The [central portal](#)
 - a. Guidance on how to provide constructive feedback is available [here](#).
 - b. Students will be notified when the evaluation period opens. Summaries of course evaluation results are available to students [here](#)

APK ADMINISTRATORS

For suggestions or concerns related to APK courses or programming, please reach out to any of the following:

- Dr. David Vaillancourt, APK Department Chair, vcourt@ufl.edu
- Dr. Demetra Christou, APK Department Vice Chair, ddchristou@hhp.ufl.edu
- Dr. Steve Coombes, APK Graduate Coordinator, rachaelseidler@ufl.edu
- Dr. Anna Gardner, APK Undergraduate Coordinator, akgardner@ufl.edu

Grading

Evaluation Components	Course Objectives Met	Points Per Component	Weighted % of Total Grade
Module Quizzes	1-11	186 points	10%
Discussion Boards	1-11	65 points	10%
Applied Assignments	1-11	100 points	10%
Article Synopses (x4)	1-11	20 points	10%
Supplement Presentation	11	50 points	10%
Summary Flyer	1-11	50 points	10%
Midterm Exam	1-11	100 points	20%
Cumulative Final Exam	1-11	100 points	20%
Extra-credit Bonus points earned from writing module practice questions	1-11	12 total bonus points possible to be added to low quiz scores	Final grade % improvement cannot exceed 2% from all extra-credit opportunities
Final exam score replacing midterm exam score	1-11	If the final exam score is higher than the midterm exam score, the final exam score will replace the midterm exam score	Final grade % improvement cannot exceed 2% from all extra-credit opportunities

Module Quizzes - Each learning module contains a graded quiz consisting of 10 objective questions related to all components of the module plus one objective question from each previous learning module. This mean that the first quiz will be worth 10 total points, followed by 11 total points for the second, and so on until the final quiz is worth 21 total points. The overall total amount of points earned via module quizzes is 186. Quiz questions will be randomly selected from a question bank specific to each module. Each module quiz question bank contains multiple questions aligning with each individual module objective provided at the top of each learning module page in e-Learning. All quizzes are available from the first day of classes, but each module has a due date corresponding to the end of the week of the module

according to the course schedule. Specifically, quizzes are due by Sunday at 11:59pm EST each week. Students are permitted **ONE** attempt on each module quiz. Students are permitted to utilize their textbooks, lecture notes, or lecture videos while completing the quizzes. Explanations are provided for every question within the quiz question banks and students will be able to see the correct answer along with the corresponding explanation upon submitting the quiz. Honorlock is NOT needed for Module Quizzes.

Discussion Boards – Each of the 12 learning modules contains a graded Discussion Board assignment. These assignments offer students an opportunity to reflect on the application of the course material and how it may impact their personal life and career. Each Discussion Board assignment is worth 5 points. A rubric is used to grade responses to ensure students provide thoughtful reflections and meaningful interactions with their classmates. The rubric used is provided below:

Length of Post: Discussion thread posts should be 25 words or more in length.	1 pts Full Marks Post is 25 or more words in length.	0 pts No Marks Post is less than 25 words in length.
Depth of post: The post demonstrates a thoughtful response to the discussion question.	1 pts Full Marks A thoughtful response to the discussion question is evident in the post.	0 pts No Marks A thoughtful response to the discussion question is not evident in the post.
Accuracy of Post: The post contains information that is supported by the class learning materials.	1 pts Full Marks The post contains information that is supported by the class learning materials.	0 pts No Marks The post contains information that is not supported by the class learning materials.
Writing skill of post: The post should contain proper grammar and spelling.	1 pts Full Marks The post is written with proper grammar and spelling.	0 pts No Marks The post contains one or more grammar or spelling errors.
Collegiality: Each student should reply to at least one of their classmate's posts by the due date of the discussion.	1 pts Full Marks Student replied to at least one of their classmate's posts by the due date.	0 pts No Marks Student did not reply to one of their classmate's posts by the due date.

Applied Assignments – Learning modules 2 – 11 include assignments designed to provide hypothetical food intake and nutrient analysis information in a case study format whereby students answer objective (multiple-choice) questions whose answers can be gleaned from a review of the provided case. Applied Assignments provide students an opportunity to practice case study-based questions similar to what they may see on the midterm or final exam, specifically questions that require application of macronutrient and micronutrient recommendations discussed throughout the course. Each applied assignment is worth 10 points and students may complete the

assignments as many times as they like. The highest score earned on any attempt will be used in the calculation of the final grade.

Article Synopses - Students will search the available strength and conditioning literature using a relevant database of research journals (i.e., Google Scholar, SportDiscus, PubMed) to find 4 peer-reviewed research articles related to one of the course topics for deeper reflection. Article synopses are due at the end of modules 3, 6, 9, and 12, respectively. After reading the article, the student will write a synopsis of it to include the following 5 topic headers: 1. Reason for Selection 2. Takeaways 3. Limitations 4. Follow-up Study 5. Transferability. Students should briefly summarize why they selected the article, what conclusions you derived from the article that you plan to put into use in your own practice, how you would have designed the study differently, how you would design a follow-up study, and how the results might impact a population other than that in the study. The discussion board assignments in modules 3, 6, 9, and 12 will ask students to paste their article synopsis and a pdf copy of the article to the board so that every member of the class may benefit from the information each other provided. Each article synopsis assignment is worth 5 points and a rubric are used for grading. The rubric is provided below:

Reason for Selection	1 pts Full Marks A description of why the student selected the article is provided.	0 pts No Marks A description of why the student selected the article is not provided.
Transferability	1 pts Full Marks The post demonstrates a thoughtful response to the reflection of how the results may impact different populations from those in the study.	0 pts No Marks The post does not demonstrate a thoughtful response to the reflection of how the results may impact different populations from those in the study.
Takeaways	1 pts Full Marks The student describes what aspects of the article they will use in their own practice..	0 pts No Marks The student does not describe what aspects of the article they will use in their own practice.
Follow Up Study	1 pts Full Marks The student proposes a design for a follow up study.	0 pts No Marks The student does not propose a design for a follow up study
Limitations	1 pts Full Marks The student describes what they would have done differently had they designed the study themselves..	0 pts No Marks The student does not describe what they would have done differently had they designed the study themselves.

Nutrition Supplement Presentation - Students will record a 10-minute presentation describing the chemistry, metabolism, cost, potential ergogenic benefit, and evidence-based recommendations for use of a nutritional supplement of their choice using Voicethread. Detailed instructions for creating the presentation are provided in Canvas. The Nutrition Supplement Presentation assignment is worth 50 points. A rubric is used for grading and is provided below:

<p>Advertisement and Price per serving:</p> <p>A screenshot of an advertisement for the supplement and a description of the price per serving is included.</p>	<p>10 pts Full Marks Both the advertisement and price per serving are provided</p>	<p>5 pts Half Marks Either an advertisement or the price per serving is missing.</p>	<p>0 pts No Marks Both the advertisement and the price per serving are missing</p>
<p>Claimed action:</p> <p>The claimed actions influencing athletic performance are provided.</p>	<p>10 pts Full Marks Thorough and complete description of the claimed actions of the supplement as they pertain to athletic performance.</p>	<p>5 pts Half Marks Incomplete description of the claimed actions of the supplement as they pertain to athletic performance.</p>	<p>0 pts No Marks Claimed action of supplement as it pertains to athletic performance is not in the presentation.</p>
<p>Interpretation of Claims:</p> <p>Your interpretation of the claimed actions based on your understanding of physiology and biochemistry (in other words - based on what you know of physiology and biochemistry, do the claimed actions make sense? Why?)</p>	<p>10 pts Full Marks Thorough and complete interpretation of the claims of the supplement based on principles of physiology and biochemistry.</p>	<p>5 pts Half Marks Incomplete description of the supplement claims based on principles of biochemistry and physiology.</p>	<p>0 pts No Marks Description of supplement claims based on principles of biochemistry and physiology is missing from presentation.</p>
<p>Supporting Evidence:</p> <p>Describe the quality of the research on the supplement. Provide specific evidence from peer reviewed studies (in other words - show data that demonstrates that the supplement does or does not influence athletic performance)</p>	<p>10 pts Full Marks Thorough and complete description of the best available evidence describing the efficacy of the supplement as it pertains to athletic performance including appropriate citation and bibliography slide.</p>	<p>5 pts Half Marks Incomplete description of the quality of available evidence, inappropriate or missing citations, or missing bibliography slide.</p>	<p>0 pts No Marks Description of available evidence, citations, and bibliography slide are missing.</p>

Recommendation: Determine if you would recommend this supplement to an athlete. Why or why not?	10 pts Full Marks Recommendation and rationale are provided in presentation.	5 pts Half Marks Either the recommendation or rationale for the recommendation are missing from the presentation.	0 pts No Marks Recommendation and/or rationale are not provided in the presentation.
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Sports Nutrition Summary Flyer – Students will create an educational flyer that could be provided to patients, clients, or athletes throughout their career and that contains a summary of the energy, macronutrient, micronutrient, fluid, timing, and supplement recommendations learned throughout the course. Detailed instructions for creating the flyer are provided in Canvas. The Sports Nutrition Summary Flyer assignment is worth 50 points. A rubric is used for grading and is provided below:

Energy	10 pts Full Marks Description of how to calculate daily energy intake, daily total energy expenditure, and energy balance are provided as are the components of total energy expenditure and the possible energy balance outcomes.	5 pts Half Marks One to three of the following components are missing or improperly described based on information provided in the course content: Description of how to calculate daily energy intake, daily total energy expenditure, and energy balance; the components of total energy expenditure and the possible energy balance outcomes.	0 pts No Marks Four or more of the following components are missing or improperly described based on information provided in the course content: Description of how to calculate daily energy intake, daily total energy expenditure, and energy balance; the components of total energy expenditure and the possible energy balance outcomes.
Macronutrient Recommendations	10 pts Full Marks Descriptions of the role of each macronutrient and the recommended intakes of each are provided including both relative intake and AMDR recommendations and examples of how to calculate each.	5 pts Half marks One to three of the following components are missing or improperly described based on information provided in the course content: Descriptions of the role of each macronutrient and the recommended intakes of each are provided including both relative intake and AMDR recommendations and	0 pts No Marks Four or more of the following components are missing or improperly described based on information provided in the course content: Descriptions of the role of each macronutrient and the recommended intakes of each are provided including both relative intake and AMDR recommendations and

		examples of how to calculate each.	examples of how to calculate each.
Micronutrient Recommendations	10 pts Full Marks Descriptions of the role of 5 vitamins and 5 minerals and the recommended intakes of each are provided.	5 pts Half marks One to three of the following components are missing or improperly described based on information provided in the course content: Descriptions of the role of 5 vitamins and 5 minerals and the recommended intakes of each are provided.	0 pts No Marks Four or more of the following components are missing or improperly described based on information provided in the course content: One to three of the following components are missing or improperly described based on information provided in the course content:
Fluid Recommendations	10 pts Full Marks Fluid recommendations for an entire day, 2-4 hours prior to exercise, 10-20min prior to exercise, during exercise, and immediately following exercise are provided along with recommendations on the type of beverage to consume at each time frame.	5 pts Half marks One to three of the following components are missing or improperly described based on information provided in the course content: Fluid recommendations for an entire day, 2-4 hours prior to exercise, 10-20min prior to exercise, during exercise, and immediately following exercise are provided along with recommendations on the type of beverage to consume at each time frame.	0 pts No Marks Four or more of the following components are missing or improperly described based on information provided in the course content: Fluid recommendations for an entire day, 2-4 hours prior to exercise, 10-20min prior to exercise, during exercise, and immediately following exercise are provided along with recommendations on the type of beverage to consume at each time frame.
Nutrition Supplements	10 pts Full Marks All of the following are included and align with information provided in course content - General guidelines for incorporating supplements - Description of 5 most pertinent	5 pts Half marks One to three of the following components are missing or improperly described based on information provided in the course content: - General guidelines for incorporating supplements -	0 pts No Marks Four or more of the following components are missing or improperly described based on information provided in the course content: - General guidelines for incorporating supplements -

	recommended supplements for selected population - Recommended dose of each supplement - Description of how to select safe products.	Description of 5 most pertinent recommended supplements for selected population - Recommended dose of each supplement - Description of how to select safe products.	Description of 5 most pertinent recommended supplements for selected population - Recommended dose of each supplement - Description of how to select safe products.
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Midterm Exam – The midterm exam consists of 50 objective questions (multiple choice, matching, true/false) worth **2 points** each. Questions will require the application of course material or knowledge of basic scientific principles covered within each of the first 6 learning modules. Exam questions are generated by the course instructor and are randomly selected from the first 6 module quiz question banks. Students should prepare for the exam by completing all weekly course readings, practice activities, and module quizzes prior to the exam. The exam is not timed; however, the Honorlock proctoring service is required to complete it. Honorlock is included on the e-Learning platform and no additional downloads are required. **ONE** attempt is allowed on the midterm exam. Explanations are provided for every question within the quiz question banks and students will be able to see the correct answer along with the corresponding explanation upon submitting the exam. The exam will be available for one week following Module 6 in the course schedule and is due the date specified in CANVAS at 11:59pm EST.

Cumulative Final Exam - The cumulative final exam will consist of 100 objective questions (multiple choice, matching, true/false) worth **1 point** each. Questions will require the application of course material or knowledge of basic scientific principles covered within each of the 12 learning modules. Exam questions are generated by the course instructor and are randomly selected from all 12 module quiz question banks. Students should prepare for the exam by completing all weekly course readings, practice activities, and module quizzes prior to the exam. The exam is not timed; however, the Honorlock proctoring service is required to complete it. Honorlock is included on the e-Learning platform and no additional downloads are required. **ONE attempt** is allowed on the final exam. Explanations are provided for every question within the quiz question banks and students will be able to see the correct answer along with the corresponding explanation upon submitting the exam. The exam will be available for one week following Module 12 in the course schedule and is due the date specified in CANVAS at 11:59pm EST.

Final Exam Substitute Option – Students have the option to complete the [CISSN](#) certification exam offered by the International Society of Sports Nutrition as a substitute for the course final exam. Students who select this option are required to become a member of the ISSN and to pay for the exam out of pocket. The ISSN offers a large discount on the exam for students in this course and the instructor will provide instructions for obtaining this discount via an announcement early in the course. **All students must complete the APK6167 course final exam with a score of at least 50% in order to substitute the CISSN exam. The substitution option described here also only applies if a student receives a higher percentile score on the CISSN exam than the APK6167 course final exam and wishes to use it as a substitute.**

Module Activities - Approximately three ungraded practice assignments are available in each of the 12 learning modules. Links to the practice assignments are under the "Practice" header on the module learning pages. The practice assignments correspond to the learning material in the module. They may be completed an unlimited number of times, Honorlock is not required, and questions and answers are viewable between attempts. All practice assignments are available from the first day of the course and there are no due dates. These are optional assignments designed to help students gauge their comprehension and application of course learning material as it pertains to stated course objectives. Scores earned from any practice assignment **DO NOT** affect a student's final grade in any way. Aligns with course objectives 1-12.

Extra Credit – This course includes the following extra credit opportunity:

1. Each learning module contains an extra credit practice-questions assignment. The assignment involves students creating up to 2 practice questions from the module's learning material for inclusion within the practice question banks in the course. Each new question created is worth 0.5 bonus points to be added to the lowest exam scores following the completion of all 12 module quizzes. This means that a maximum of 12 bonus points could be added to exam scores (Module 1-6 for the Midterm and Module 7-12 for the Final). Extra credit assignments are due at the end of the week the module is assigned in the course schedule.

NOTE: UF policy limits the ability of extra credit assignments to improve a student's final grade more than 2%. Therefore, any combination of the extra credit assignments listed above will be limited to increasing the student's final grade no more than 2 percentage points. For example, if a student's final grade is calculated at 89% (B+) after all required graded assignments, quizzes, and exams have been completed, but the student has earned extra credit via the opportunities listed above, the highest grade they are eligible to earn via the extra credit is a 91% (A-)

GRADING SCALE

All course assignments are administered and graded within the APK6167 Canvas course page, so students will have access to all grades as they submit assignments. Any assignment that requires the instructor to manually grade some aspect of it will be graded within one week of its due date. Final Grades will be rounded up at .5 and above. The table below provides a reference. More detailed information regarding current [UF grading policies](#) is found at the link. Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e. asking for preferential treatment and will be handled accordingly).

Letter Grade	Percent of Total Points Associated with Each Letter Grade	GPA Impact of Each Letter Grade
A	92.5-100%	4.0
A-	89.5 – 92.49%	3.7
B+	86.5-89.49%	3.33
B	79.5-86.49%	3.0
C+	76.5-79.49%	2.33
C	72.5-76.49%	2.0
D+	66.5-69.49%	1.33
D	59.5-66.49%	1.0
E	0-59.49%	0

Addressing Student Concerns

Students should bring any questions or concerns related to the course to the attention of the instructor via email through Canvas or directly. Examples of concerns include, but are not limited to:

- Clarification on quiz or exam questions
- Clarification on instructions for article synopsis, discussion board, nutrition supplement, or sports Nutrition flyer assignments
- Difficulty accessing course materials.
- Clarification on the suitability of a research article to review for the article synopses assignments

The instructor will respond to all questions or concerns within 24 hours on weekdays and 48 hours on weekends and will recommend a zoom appointment if needed.

Weekly Course Schedule

Week	Dates	Assigned Module & Schedule Notes	Assessments Due
1	8/21-8/31 (includes Drop/Add)	Module 1	Module 1 Quiz Module 1 Discussion
2	9/1 – 9/7	Module 2	Module 2 Quiz Module 2 Discussion Applied Assignment 1
3	9/8 – 9/14	Module 3	Module 3 Quiz Module 3 Discussion Applied Assignment 2 Article Synopsis 1
4	9/15-9/21	Module 4	Module 4 Quiz Applied Assignment 3 Module 4 Discussion
5	9/22-9/28	Module 5	Module 5 Quiz Applied Assignment 4 Module 5 Discussion
6	9/29-10/5	Module 6	Module 6 Quiz Applied Assignment 5 Module 6 Discussion Article Synopsis 2
7	10/6-10/12	Midterm Exam	Midterm Exam
8	10/13-10/19	Module 7	Module 7 Quiz Applied Assignment 6 Module 7 Discussion
9	10/20-10/26	Module 8	Module 8 Quiz Applied Assignment 7 Module 8 Discussion Article Synopsis 3
10	10/27-11/2	Module 9	Module 9 Quiz Applied Assignment 8 Module 9 Discussion
11	11/3-11/9	Module 10	Module 10 Quiz Applied Assignment 9 Module 10 Discussion APK6167 Nutrition Supplement Presentation

12	11/10-11/16	Module 11	Module 11 Quiz Applied Assignment 10 Module 11 Discussion
13	11/17-11/30 Includes Thanksgiving Holidays	Module 12	Module 12 Quiz Module 4 Discussion Article Synopsis 4 Sports Nutrition Summary Flyer
14	12/1-12/7	Final Exam	Final Exam

SUCCESS AND STUDY TIPS

- Utilize the module practice assignments as study tools. You may complete them as many times as you like. Complete the assignments while you are working through the module and then again when you are reviewing for the exams
- Complete the extra credit opportunities.
- Sixty percent of the final grade comes from graded assignments that allow you to use any learning material to complete them. Take advantage of these assignments to bring up any quiz or exam grades in which you are disappointed.
- Perform well on the final exam.

***Note Regarding Program Comprehensive Exam** - If you choose APK6167 as one of the courses to include within your comprehensive exam, know that the exam will contain 60 objective questions (multiple choice, true/false, matching) that are pulled at random from a question bank similar to the quizzes and exams in this course. If you complete the exam in a future semester, you will be able to access this APK6167 Canvas course and review lecture videos and exam questions and answers. If you complete the exam during this semester, you will need to work ahead in the course to ensure you have been introduced to all of the topics that are found on it. All modules and assignments are available from the first week of the course. I recommend completing the practice quizzes in each module as many times as needed to gain practice with course content not yet covered by the time you take the exam.